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DEPARTMENT OF CONSERVATION AND NATURAL RESOURCES  
**DIVISION OF ENVIRONMENTAL PROTECTION**

333 W. Nye Lane, Room 138  
Carson City, Nevada 89706

March 2, 2004

Mr. Jim Sickles  
Superfund Division  
U.S. EPA Region 9  
75 Hawthorne Street  
San Francisco, CA 94105

Mr. Earle Dixon  
U.S. BLM Carson Field Office  
5665 Morgan Mill Road  
Carson City, NV 89701

SUBJECT: 4<sup>th</sup> Quarter Radionuclide Raw Data for the Yerington Mine Groundwater.

Dear Mr. Sickles and Mr. Dixon:

As you are aware, the December 2003 quarterly groundwater monitoring event for the Yerington Mine Project incorporated both mine site wells and twenty-seven off-site domestic or municipal wells. Samples from the domestic wells in the vicinity were analyzed for Radium 226, Radium 228 and Total Uranium. These three analytes will hereinafter be referred to as the radionuclide data. On February 27, 2004, the Nevada Division of Environmental Protection (NDEP) received the attached 4th Quarter Radionuclide Raw Data for the Yerington Mine groundwater from Atlantic Richfield Company (ARC). A seven-day extension period had been granted from the original February 20, 2004 submittal date. The full Annual Report that will include all data discussed herein, plus the other analytes (i.e. metals analyses) is still forthcoming from Atlantic Richfield. This correspondence is intended to transmit and discuss the radionuclide data.

Based on a cursory review of this data, detections of Radium 226 and 228 appear to be within the federal Drinking Water Standard, or Maximum Contaminant Level (MCL), both on-site and off-site. The remaining focus of this letter is in regard to Total Uranium.

The federal MCL for Uranium is 30 micro-grams per liter (ug/l or parts per billion, ppb). To help put an MCL in perspective, they are developed based on the potential for adverse health effects to occur to one extra individual in 10,000 to one in a million. They are also based upon that person consuming 2 liters of the water in question every day for 70 years.

Of the twenty-seven (27) domestic and municipal water supply wells sampled, the wells considered to be in a locations not influenced by the Yerington Mine (background conditions) ranged from 2.73 ug/l to 39.5 ug/l. In reviewing the data, eight (8) domestic wells that were tested had concentrations of Uranium that exceed 30ug/l. The NDEP believes these eight (8) households should be included in the action plan

discussed below. Furthermore, due to the potential for variability in laboratory analysis, and until such time that additional data can be collected and evaluated, the action plan is designed to address residences with Uranium concentrations greater than 25 ug/l. This decision increases the number of wells of concern to ten (10).

Many wells on the mine property have elevated concentrations of Uranium. The concentrations are lowest in wells to the north and east of the pit lake with only one concentration of wells sampled exceeding 30 ug/l. The highest concentrations occur in PW-11 (500 ug/l), PW-09 (400 ug/l), MW-05 (7280 ug/l) and MW-5 pit A (11200 ug/l). These wells are generally located in the vicinity of the former Anaconda Tailings Ponds that are also subject to other current investigations

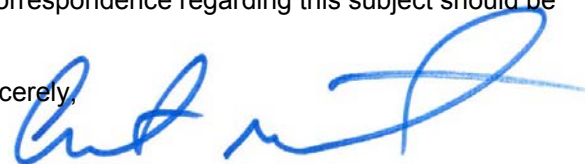
**In order to address concerns regarding this Uranium data, the Division has developed the following action plan that should be initiated immediately:**

- (1) The NDEP believes the ten (10) households that had analytical results above 25 ug/l should be sampled on a monthly basis for the next four (4) months to aid in a better determination of the water quality.
- (2) As a precautionary measure, bottled water should be provided to all households that tested with Total Uranium concentrations greater than or equal to 25 ug/l. NDEP has contacted ARC and they have agreed to supply bottled water to these residents.
- (3) All domestic wells should be retested immediately. ARC has moved their next quarterly sampling field schedule up one month to accommodate this need. The ARC contractor will sample all wells during the week of March 8, 2004.
- (4) All domestic wells in the vicinity of the mine site, where owners will allow access, should be sampled. This will provide an additional assessment of the areas groundwater conditions and aid in further horizontal and vertical delineation. ARC has agreed to sample all wells that will grant access, however, due to cumbersome access agreements required by ARC prior to sampling on private property, delays should be anticipated and alternatives should be discussed and evaluated by the Agencies.
- (5) Research into each well's construction should commence in order to determine well conditions and screened intervals, as well as the depth from which each well is drawing water.
- (6) The NDEP will immediately begin the process of notifying each resident that was part of this sampling event of the well's individual result. This communication with the residents will also include more information on Uranium and it's potential health effects. The NDEP is working with the Nevada State Health Division and the US EPA in interpreting toxicology and health effect limits and further validating the data provided under this cover letter.
- (7) The NDEP believes that a public meeting should be conducted as soon as possible (preferably within the next few weeks) and NDEP staff will contact the members of the Public Meeting Committee to discuss proposed meeting content and potential dates.

Based on limited discussion to date, the NDEP anticipates that the potential for migration of Uranium from the mine is likely similar for other metals of concern at the mine. The data evidenced in the attached report is likely from naturally occurring materials. However, we are hereby requesting assistance from EPA experts in conducting preliminary contaminant transport and fate calculations to assist in better understanding this potential. NDEP suggests that Steve Acree is an expert that has assisted Nevada on past groundwater investigations, is familiar with general subsurface conditions and would be a tremendous asset to this investigation. We request that these calculations be provided within 90 days.

Should you have any questions or if I can be of any assistance, please do not hesitate to contact me at (775) 687-9376 or FAX (775) 687-6396. All future correspondence regarding this subject should be addressed to the undersigned.

Sincerely,



Arthur G. Gravenstein, P.E.  
Staff Engineer  
Remediation Branch  
Bureau of Corrective Action

Encl (1) Radionuclide Data Summary Tables and Maps

Ec w/: Ms. Jennifer Carr, NDEP  
Mr. Dave Emme, NDEP

Cc w/:

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